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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,528	12/27/2001	Benjamin N. Eldridge	P6C3-US	2563

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EXAMINER

KOBERT, RUSSELL MARC

ART UNIT PAPER NUMBER

2829

DATE MAILED: 11/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,528

Applicant(s)

ELDRIDGE ET AL.

Examiner

Russell M Kobert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Applicants' amended the specification by inserting before the first line that the application is a continuation of Application Serial No. 09/846,490, filed April 30, 2001, now pending. However, Applicants' have not indicated that Application Serial No. 09/846,490 is also a division of Application Serial No. 09/156,957, filed September 18, 1998, now U.S. Patent No. 6,246,247 which is also a division of Application Serial No. 08/554,902, filed November 9, 1995, now U.S. Patent No. 5,974,662.

Corrective action is required.

2. It is further noted that this Application is based on a series of Continuation-In-Part (CIP) Applications with an earliest effective filing date of November 16, 1993. It is not apparent if the claimed subject matter in this Application is supported by the disclosure of one or more CIP Applications.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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4. Claims 43-57 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 5,806,181. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are broader than those presented in the 5,806,181 patent. Moreover, the subject matter of both the 5,806,181 patent and that of the instant application claim probe structures having a probe card, a plurality of probe elements and methods of probing an electronic component by contacting the electronic component with a plurality of contact elements.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claims 43-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Takagi et al (5055780).

Takagi et al anticipates a tested semiconductor device produced by a process comprising the steps of:

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providing a wafer (3) having a plurality of semiconductor devices (33) thereon, each of said semiconductor devices including a plurality of electrical contact pads (34);

providing a probe card assembly, said probe assembly including a probe card (70, 71, 72) having a plurality of electrical contacts (12), a probe substrate (2) having a plurality of elongate, resilient probe elements (294), and a compliant interconnection structure (27, 26, 28, 292) electrically connecting said ones of said electrical contacts with corresponding ones of said probe elements (col 7, ln 23-34);

contacting said wafer and said probe card assembly such that ones of said electrical contact pads of said semiconductor devices are in electrical contact with ones of said probe elements (see Figure 3); and

testing said semiconductor devices (col 4, ln 1-3); as recited in claim 43.

As to claim 44, Takagi et al shows (Figure 3) the process further comprises aligning tips of said probe elements with said corresponding electrical contact pads.

As to claim 45, Takagi et al shows the aligning tips of said probe elements includes altering an orientation of said probe substrate with respect to said probe card (via adjustment of screw 80).

As to claim 46, Takagi et al shows the altering comprises moving a moveable element (80) disposed so as to affect an orientation of said probe substrate with respect to said probe card.

As to claim 47, Takagi et al shows the aligning further comprises aligning said tips with an alignment plate (4).

As to claim 48, dicing the wafer to singulate the semiconductor devices is considered a process that is inherent or within the normal range of manufacturing a semiconductor device.

As to claim 49, Takagi et al shows the probe substrate comprises a space transformer (inherent to probe substrate 2 wherein the pitch of probe contacts is transformed in at least one dimension).

Takagi et al anticipates a tested semiconductor device produced by a process comprising the steps of:

providing a probe card (70, 71, 72) comprising a plurality of electrical contacts (12);

providing a probe substrate (2) moveably fixed to said probe card and comprising a plurality of elongate, resilient probe elements (294), ones of said elongate resilient probe elements being in electrical communication with ones of said electrical contacts (col 7, ln 23-34);

aligning tips of said probe elements by altering an orientation of said probe substrate with respect to said probe card, said altering comprising moving a moveable element (80) disposed so as to affect an orientation of said probe substrate with respect to said probe card;

providing a semiconductor device (3, 33);

bringing said tips into contact with said semiconductor device (see Figure 3); and

testing said semiconductor device (col 4, ln 1-3); as recited in claim 50.

As to claim 51, Takagi et al shows the moveable element is threaded (inherent to screw 80).

As to claim 52, Takagi et al shows the moveable element comprises a screw (80).

As to claim 53, the use of a differential screw is considered an inherent property of any screw since each of the screws (80) of Takagi et al can be adjusted differently.

As to claim 54, it is considered an inherent characteristic that when the moveable element is moved in a first direction it causes at least a portion of said probe substrate to move toward said probe card (ie. When the screw 80 is rotated in a clockwise manner).

As to claim 55, it is considered an inherent characteristic that when the movable element is moved in a second direction it causes at least a portion of said probe substrate to move away from said probe card (ie. When the screw 80 is rotated in a counter-clockwise manner).

7. Claims 43-45 and 47-49 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by lino et al (5412329).

8. Claims 43-45 and 47-49 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Frost et al (4795977).

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9. The following is a statement of reasons for the indication of allowable subject matter:

Claims 56 and 57 would be allowable when the obviousness-type double patenting rejection is overcome as set forth in this Office action.

The method according to claim 56, wherein the altering comprises actuating a servo mechanism disposed to alter a position of the probe substrate with respect to the probe card and the method according to claim 57, wherein the altering comprises actuating a piezoelectric actuator disposed to alter a position of the probe substrate with respect to the probe card have not been found.


A shortened statutory period for response to this action is set to expire three month(s) from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kobert whose telephone number is (703) 308-5222.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Russell M. Kobert
Patent Examiner
Group Art Unit 2829
November 19, 2002



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